081474 - California Coastal Sediment Master Plan

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Study Purpose:

The Master Plan study area encompasses the entire California coastline, including the nearshore ocean environment and the coastal watersheds. The purpose of the study is to develop a comprehensive plan, for the management, restoration, protection, and preservation of the sediment resources along the coast of California. Ultimately, the Master Plan will provide analyses that will enable Federal, state, and local entities to assess and prioritize regionally based projects for potential investment of program funds. The study will evaluate alternatives for reducing damages from coastal storms; increasing the natural sediment supply to the coast through dam removal and other means; restoring aquatic ecosystems; and identifying potential sources of sediment, such as material dredged from ports and harbors. Some of these alternatives may lie outside the Federal interest. The Master Plan will provide Federal and non-Federal entities with an adaptive, programmatic road map to plan and program potential future coastal resources projects. The Master Plan will allow these entities to develop water resources projects within a system-oriented context where data can be easily shared and technical expertise and tools can be efficiently directed to solve coastal resources problems on a regional basis.

Because of the large geographic area (1100-miles of California coastline) covered by the Master Plan, a Geographic Information System (GIS) based application and database will be required to manage the voluminous data to be collected. The Master Plan GIS applications along with the economic analysis contained within the Master Plan will provide the backbone for running physical and economic optimization decision support tools to assist Federal, State, and local decision makers in identifying, ranking, and selecting projects for investment that would yield potentially significant regional benefits, relative to the costs.

The intent of the Master Plan is to minimize the number of discrete water resources projects by regionalizing solutions that holistically address individual problem areas. Any subsequent regionalized projects recommended in the Master Plan will be considered in collaboration with other Federal and non-Federal agencies, including USEPA, California State Resources Agency, NOAA, regional & local governments, and USGS.

Summary:

The intent of the California Coastal Sediment Master Plan (Master Plan) is to develop a comprehensive sediment management plan at a super-regional scale that covers the entire coastal zone of the state of California. In order to do that the study must first gather all existing data at a coarse level that is relevant to establishing the foundation for sediment management along the coast. Once this task is completed, data gaps can then be identified. A more refined data collection program will be initiated for discrete regions upon accomplishing the initial phase of the state-wide data collection efforts. By undertaking an approach of first developing a broadly based data management system for coastal sediments and then nesting this system to specific regions, will allow for useful information being almost immediately available across the State’s shorelines for other initiatives undertaken by interests outside the Master Plan program and identifying areas of immediate focus for developing regional decision support systems for the management of coastal sediments. As decision support systems are developed at a regional level, these systems will be modified for export to other physically compatible regions, until decision support systems for sediment management within each coastal region has been placed into operation. Tackling the enormous project area in this manner will allow sediment management answers to be developed quicker, and allows the study to focus on specific sediment issues in each region. For example, a lack of sediment is of great concern to those in central and southern California, whereas, environmental issues, related to sediment, are a greater concern in northern California. It is important that the study does not treat the entire coast in the same manner.

Background Information:

In 1999, the California Department of Boating and Waterways commissioned San Francisco State University to ascertain the impact of beaches on California’s economy. The results showed that in 1995, it was estimated that the state’s beaches were responsible for $10 billion in direct spending (updated to 1998 to $14 billion), $1 billion in state taxes and more than 500,000 jobs. The spending, with a multiplier effect, was almost 3 percent of the economic activity in the state in 1995. Beach-related jobs constituted 3.5 percent of the state’s employment. (King and Potepan, 1997)

This is important at both the Federal and State levels. A strong California economy reflects in California taxpayers sending a record $23 billion windfall to Washington in 1999, and maintained its donor state status for a 13th straight year by November 2000. Demonstrating that protecting California coastal resources (closely related with the economy's strength) is directly linked to Federal benefits. (California's Balance of Payments with the Federal Treasury FY 81-99 The California Institute for Federal Policy Research http://www.calinst.org/pubs/bop2000.htm)

History:

In the past, the dominant source of sediments to the coast has been rivers and streams. These were the transport mechanisms that moved sediment from the mountains and uplands to the lowland basins and nearshore systems. However, over the last thirty or forty years most of the rivers have been tamed through the construction of large dams (more than 1,200), trapping all but the finest sediments being transported downstream.

Damming rivers has cut off more than 50 percent of the sand supply. As a result, the beaches of California have undergone substantial erosion since the construction of these dams. Only in northern California is there a constant supply of sediments to the nearshore as there wasn’t a need to dam the streams and rivers in the early days and now the Wild and Scenic Rivers Act of 1972 protect them. (Kenzer, et. al., 1992)

Other human induced factors to consider in this equation are the impacts over tourism industry and Californian’s quality of life. As much as 85 percent of the state’s population live within 50 miles to the coastline. This results in significant urbanization pressures, which impact coastal resources.

Residents and visitors enjoy California's beaches; more than 100 million visitors come to the California beaches annually, almost 60 million visitors in Los Angeles County alone. These beach users are generating millions of dollars in taxes to local, state and Federal level. (Kenzer, et. al, 1992)

California is now the seventh ranking economy in the world, about the size of Mainland China, and larger than Brazil, Canada or Spain. California's gross product exceeded the trillion-dollar mark in 1997, the first state to achieve this record. In 1999, California was the first state to top $1 trillion in personal income. (California Dept of Finance http://www.dof.ca.gov/HTML/FS_DATA/HistoryCAEconomy/index.htm)

FAQs:

Maps:

Stakeholders:

Congressional Interest:
Ken Calvert – R (CA-44)
http://calvert.house.gov/
Lois Capps – D (CA-23)
http://www.house.gov/capps/
Elton Gallegly – R (CA-24)
http://www.house.gov/gallegly/
Dana Rohrabacher – R (CA-46)
http://rohrabacher.house.gov/
Susan Davis – D (CA-53)
http://www.house.gov/susandavis/
John Campbell – R (CA-48)
http://campbell.house.gov/

Local Sponsors:
California Resources Agency
http://resources.ca.gov/departments.html
California Department of Boating and Waterways
http://www.dbw.ca.gov/

News Releases:

Related Links:

Please visit the Coastal Sediment Management Workgroup Homepage (http://dbw.ca.gov/csmw/csmwhome.htm) for

more information on the Master Plan as well as policy and technical documents.

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